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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,156	02/25/2004	Lakshman R. Sehgal	3840-006-27	8149

24510 7590 04/21/2006

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EXAMINER	
PRIEBE, SCOTT DAVID	

ART UNIT	PAPER NUMBER
1633	

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No.	Applicant(s)	
	10/785,156	SEHGAL ET AL.	
	Examiner	Art Unit	
	Scott D. Priebe, Ph.D.	1633	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Scott D. Priebe, Ph.D (PTO)*.. (3)*Lakshman R. Seghal (inventor/phone)*.

(2) *Ping Wang (Appl. rep./in person)*. (4)*Jonathan Wong (inventor/phone)*.

Date of Interview: *18 April 2006*.

Type: a)☐ Telephonic b)☐ Video Conference
c)☒ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☒ Yes e)☐ No.
If Yes, brief description: *Proposed claims (attached)*.

Claim(s) discussed: *all generally*.

Identification of prior art discussed: *Bach, Waugh, Vassalli, Umana*.

Agreement with respect to the claims f)☐ was reached. g)☒ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *See Continuation Sheet*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

SCOTT D. PRIEBE, PH.D
PRIMARY EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Briefly discussed enablement rejection and discussed whether further limiting the proposed claims to treating thrombosis associated with atherscIerotic disease and local delivery to site of thrombosis would overcome the rejection. Discussed the obviousness rejection and whether the cited art provided a reasonable expectation of success for use of gutless adenoviral vector. Examiner pointed out that guarantee of success is not required to establish obviousness.

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Attachment to Interview Summary of 4/18/2006

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Examiner Scott David Priebe	571-272-0733	571-273-0733

Original ☐ will / ☒ will not follow. Pages *(including fax sheet)*: 7

Comments:

pw11868/359114-4

DOCKET NO. 3840-006-27

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	Lakshman R. SEHGAL, et al.	ART UNIT:	1633
SERIAL NO.:	10/785,156	EXAMINER:	Scott David Priebe
FILING DATE:	February 25, 2004		
FOR:	THERAPEUTIC APPLICATIONS OF THROMBOMODULIN GENE VIA VIRAL AND NON-VIRAL VECTORS		

Per Examiner's request, Applicants have outlined the issues which need to be discussed during the interview of April 18, 2006 (2:00 PM).

IN THE CLAIMS

1. (Amended) A method for treating a thrombotic disease in a mammal, said method comprising:

administering to said mammal a therapeutically effective amount of a pharmaceutical composition comprising a ~~viral~~ gutless adenovirus vector,

wherein said ~~viral~~ gutless adenovirus vector comprises a nucleotide sequence encoding human thrombomodulin having an amino acid sequence recited in SEQ ID NO:2 or its variant, and a promoter operably linked to said nucleotide sequence ~~wherein said human thrombomodulin has an amino acid sequence recited in SEQ ID NO:2~~, and wherein said human thrombomodulin or its variant is expressed in said mammal.

2. (Original) The method of Claim 1, wherein said pharmaceutical composition further comprises a pharmaceutically acceptable carrier.

3-4. (Canceled)

5. (Currently Amended) The method of Claim [[4]] 1, wherein said gutless adenovirus vector further comprises ~~is produced using a shuttle vector comprising~~ the nucleotide sequence recited in SEQ ID NO: 4.

6. (Currently Amended) The method of Claim 1, wherein said ~~nucleotide sequence encoding human thrombomodulin or its variant is operably linked to~~ promoter is a constitutive promoter.

7. (Currently Amended) The method of Claim 1, wherein said ~~nucleotide sequence encoding human thrombomodulin or its variant is operably linked to~~ promoter is a tissue-specific promoter.

8. (Original) The method of Claim 1, wherein said nucleotide sequence encoding human thrombomodulin or its variant is under the control of a regulatable expression system.

9. (Original) The method of Claim 1, wherein said thrombotic disease is atherosclerotic cardiovascular disease, pulmonary hypertension, acute inflammatory diseases, end-stage renal failure disease, or Alzheimer disease.

10. (Withdrawn) The method of Claim 1, wherein said viral vector is an adeno-associated virus.

11. (Withdrawn) The method of Claim 1, wherein said viral vector is a retrovirus.

12. (Withdrawn) The method of Claim 1, wherein said viral vector is a lentivirus.

13. (Withdrawn) The method of Claim 12, wherein said lentivirus is a human immunodeficiency virus.

14. (Withdrawn) The method of Claim 1, wherein said viral vector is a herpes virus.

15. (Original) The method of Claim 1, wherein said pharmaceutical composition is administered to said mammal intravascularly, subcutaneously, or intramuscularly.

16. (Withdrawn) A method for treating a thrombotic disease in a mammal, said method comprising:

administering to said mammal a therapeutically effective amount of a pharmaceutical composition comprising a non-viral vector, wherein said non-viral vector comprises a nucleotide sequence encoding human thrombomodulin or its variant, and wherein said human thrombomodulin has an amino acid sequence recited in SEQ ID NO:2.

17. (Withdrawn) The method of Claim 16, wherein said pharmaceutical composition further comprises a pharmaceutically acceptable carrier.

18. (Withdrawn) The method of Claim 16, wherein said non-viral vector is a liposome.

19. (Withdrawn) The method of Claim 16, wherein said non-viral vector is a naked DNA molecule.

20. (Withdrawn) The method of Claim 16, wherein the nucleotide sequence encoding human thrombomodulin or its variant is operably linked to a constitutive promoter.

21. (Withdrawn) The method of Claim 16, wherein the nucleotide sequence encoding human thrombomodulin or its variant is operably linked to a tissue-specific promoter.

22. (Withdrawn) The method of Claim 16, wherein the nucleotide sequence encoding human thrombomodulin or its variant is under the control of a regulatable expression system.

23. (Withdrawn) The method of Claim 16, wherein said thrombotic disease is atherosclerotic cardiovascular disease, pulmonary hypertension, acute inflammatory diseases, end-stage renal failure disease, or Alzheimer disease.

24. (Withdrawn) A method for treating a thrombotic disease in a mammal, said method comprising:

administering to said mammal a therapeutically effective amount of thrombomodulin-producing cells,

wherein said thrombomodulin-producing cells are generated by introducing a polynucleotide encoding a human thrombomodulin or its variant into a cultured cell, and wherein said human thrombomodulin has an amino acids sequence recited in SEQ ID NO:2.

25. (Withdrawn) The method of Claim 24, wherein said culture cell is human umbilical vein endothelium cell (HUVEC).

26. (Withdrawn) The method of Claim 24, wherein said polynucleotide encoding a human thrombomodulin or its variant is introduced into said cultured cell by a viral vector.

27. (Withdrawn) The method of Claim 24, wherein said polynucleotide encoding a human thrombomodulin or its variant is introduced into said cultured cell by a non-viral vector.

28. (Withdrawn) The method of Claim 24, wherein said polynucleotide encoding a human thrombomodulin or its variant is introduced into said cultured cell by calcium phosphate precipitation.

29. (Withdrawn) The method of Claim 24, wherein said polynucleotide encoding a human thrombomodulin or its variant is introduced into said cultured cell by electroporation.

1. Rejections Under 35 U.S.C. § 112, first paragraph

Claims 1-9 and 15 stand rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement for the reasons set forth on pages 3-8 of the outstanding Office Action. Specifically, the Examiner states that the specification while being enabling for embodiments of treating atherosclerotic cardiovascular disease and the vector is administered locally to a vascular (vein or artery) site of thrombus, does not reasonably provide enablement for any other embodiments embraced by the claims.

Applicants respectfully disagree and would like to discuss Applicants' newly obtained data with the Examiner.

2. Claim Rejections under 35 U.S.C. § 103

Claims 1-4, 6-9 and 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 96/06933 to Bach et al. (hereinafter "Bach") or Waugh and further in view of Vassalli et al. (hereinafter "Vassalli") and Umana et al. (hereinafter "Umana") for the reasons set forth on page 11 of the outstanding Office Action.

Claims 3-4 have been canceled. Applicants respectfully submit that Bach, Waugh, and Vassalli, individually or in combination, do not render Claims 1-2, 5, 7-9 and 15 obvious. Applicants would like to discuss with the Examiner the following issues: (1) nature of the invention and (2) the disclosure of references cited by the Examiner.